UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/696,051	10/25/2000	Kenneth R. Owens	4910.00011	4425

45149 7590 03/16/2006

TELLABS OPERATIONS, INC.
LEGAL DEPARTMENT
1415 WEST DIEHL ROAD
NAPERVILLE, IL 60563

EXAMINER	
PHUNKULH, BOB A	

ART UNIT	PAPER NUMBER
2661	

DATE MAILED: 03/16/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/696,051	OWENS ET AL.	
	Examiner	Art Unit	
	Bob A. Phunkulh	2661	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *09 January 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

The finality of the previous Office Action mailed 11/08/2005 is hereby withdrawn.

This communication is in response to applicant's 01/09/2006 Pre-Appeal conference request in the application of **Owens et al.** for "**Protection/Restoration of MPLS Networks**" filed 10/25/2000. The amendments/response to the claims have been entered. No claims have been canceled. No claims have been added. Claims 1-20 are now pending.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-3 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The claimed subject "the at least one of the second switching node and the third switching nodes is at an origin of both the working path and the protection path" is not supported by the original specification.

Claim Objections

Claim 1 is objected to because of the following informalities: please correct the claimed subject matter "a first switching node" on step b to –the first switching node—to avoid confusion for they are the same subject matter. Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 3-20 are rejected under 35 U.S.C. 102(e) as being anticipated by *Cao* et al. (US 6,721,269), hereinafter *Cao*.

Regarding claim 1, *Cao* discloses an multi-protocol label switching system (MPLS) having a working path over which data is carried from a source to a destination and further having a protection path over which data from the source to the destination w3can be carried, a method of initiating an MPLS protection path switch over from the working path to the protection path comprising the steps of:

-detecting a failure on the working path at a first switching node (a router along the path that first detects the failure) of the working path (routers along the path monitor the path and report the failure to source node col. 3 lines 39-46, and 48-51);

-transmitting a failure notification message from only a first switching node to at least a second, switching node of the working path (if a failure is detected, a router that first detects the failure propagates the physical level maintenance to the source and sink routers, col. 3 lines 48-51);

-routing data by at least one of the second switching node and a third switching node of the working path from the working path to the protection path upon the receipt of the failure notification message at least one of: the second switching node (the source router) an a third switching node (the sink node) of the working path, wherein the at least one of the second switching node and the third switching node is at an origin of both the working path and the protection path (when the source and sink routers are alerted to the path failure, the sink router switches to the secondary path for communications. The source router may then establish another explicitly routed communications path to act as a new secondary path, see col. 3 lines 53-57).

Regarding claim 3, *Cao* discloses the failure notification message travels along a path through the MPLS system, extending between the destination and the source (the source router and sink router, see col. 3 lines 53-56).

Regarding claim 4, *Cao* discloses a multi-protocol label switching (MPLS) system protection switch comprising:

a first data input port into which MPLS data is received from a data source (the data source connected to LSRS not shown in figure 1);

a first data output port from which MPLS data is sent to a second MPLS switching system comprising an MPLS working path (path S-A-B-E, see claim 1 and col. 6 lines 12-23);

a second data output port from which MPLS data is sent to a third MPLS switching system comprising an MPLS protection path (path S-C-D-E, see claim 1 and col. 6 line 12-23);

a second data input port adapted to connect to a path that follows the MPLS working path for receiving failure notifications;

whereby data received at the data input port from the data source can be selectively routed from the second MPLS switching system to the third MPLS switching system by a node at an origin of both the MPLS working path and the MPLS protection path (the source and sink routers along the path having both working and protection paths and each router acts as an origin of both the MPLS working and protection path, see figure 1 and col. 3 lines 35-57).

Regarding claim 5, *Cao* discloses the MPLS switching system of claim 4 further comprising a control input port whereat protection path failure messages are received

from at least one the second MPLS switching system and the third MPLS switching system (see claim 1 and figure 1).

Regarding claim 7, *Cao* discloses the first switching node is upstream to the failure (LSRS, see figure 1 and col. 10 lines 21-41).

Regarding claim 8, *Cao* discloses the failure is an upstream failure and is detected by a node upstream to the failure (path S-A-B-E and detected by LSRA, see figure 1 and col. 10 lines 21-41).

Regarding claim 9, *Cao* disclose the failure is downlink failure and is detected by a node downlink to the failure (path S-A-B-E and detected by LSRB, see figure 1 and col. 10 lines 21-41).

Regarding claim 10, *Cao* disclose the failure is a bi-directional failure and is detected by a pair of nodes downlink and uplink to the failure (path S-A-B-E and detected by LSRS and LSRB, see figure 1 and col. 10 lines 21-41).

Regarding claim 12, *Cao* discloses a method for MPLS protection switching from a working path to a protection path comprising:

transmitting a failure notification to a protection switch node along a path that follow the working path (see col. 3 lines 41-57); and

routing data a the protection switch node from the working path to the protection path upon receipt of the failure notification, wherein the protection switch node is at an origin of the working path and the protection path (the source and sink routers along the path having both working and protection paths and each router acts as an origin of both the MPLS working and protection path, see figure 1 and col. 3 lines 35-57).

Regarding claim 13, *Cao* discloses the failure notification is transmitted in a direction reverse to the working path (see col. 10 lines 21-41).

Regarding claim 14, *Cao* discloses the path follows the protection path mirrors the working path (see figure 1).

Regarding claim 15, *Cao* discloses detecting a failure (see col. 3 lines 49-51).

Regarding claim 16, *Cao* discloses the first switching node is upstream to the failure (LSRS, see figure 1 and col. 10 lines 21-41).

Regarding claim 17, *Cao* discloses the failure is an upstream failure and is detected by a node upstream to the failure (path S-A-B-E and detected by LSRA, see figure 1 and col. 10 lines 21-41).

Regarding claim 18, *Cao* disclose the failure is downlink failure and is detected by a node downlink to the failure (path S-A-B-E and detected by LSRB, see figure 1 and col. 10 lines 21-41).

Regarding claim 19, *Cao* disclose the failure is a bi-directional failure and is detected by a pair of nodes downlink and uplink to the failure (path S-A-B-E and detected by LSRS and LSRB, see figure 1 and col. 10 lines 21-41).

Regarding claim 20, *Cao* disclose the failure is detected by a pair of nodes downlink and uplink to the failure (path S-A-B-E and detected by LSRS and LSRB, see figure 1 and col. 10 lines 21-41).

Regarding claim 6, *Cao* discloses a multi-protocol label switching (MPLS) system comprised of a first MPLS protection switch having a data input port into which MPLS data is received from a data source;

a second MPLS switching system (either LSRA or LSRB, see figure 1) coupled to the first MPLS protection switch (LSRS, see figure 1) via a first data path carrying MPLS data, the first data path comprising an MPLS working path (path S-A-B-E, see figure 1);

a third MPLS switching system (either LSRC or LSRD, see figure 1) coupled to the first MPLS protection switch (LSRS, see figure 1) via a second data path capable of carrying MPLS data, said second data path comprising an MPLS protection path (path S-C-D-E, see figure 1);

an upstream reverse notification tree (RNT) data path extending at least between the second MPLS switching system to the MPLS protection switch, that upon a failure can carry data by which in response to the failure a switchover from a working path to a protection path can be initiated (when the source and sink routers are alerted to the path failure (the notification to the source node is reverse notification), the sink router switches to the secondary path for communications. The source router may then establish another explicitly routed communications path to act as a new secondary path, see col. 3 lines 53-57).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which the subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over *Cao* in view of *Omuro* et al. (US 5,241,534), hereinafter *Omuro*.

Regarding claim 2, *Cao* fails to explicitly disclose that re-routing data from the protection path to the working path upon the determination that the failure on the working path has been corrected.

Omuro, on the other hand, teaches re-routing (change back) data from the protection path to the working path upon the determination that the failure on the working path has been corrected (see abstract).

Therefore, it would have been obvious to one having ordinary skill in the art at the time of invention was made to implement the teaching of *Omuro* in the system taught by *Cao* in order to restore the original path upon the restoration the path –where the original path usually is cost efficient and shortest path.

Response to Arguments

Applicant's arguments with respect to claims 1-3 have been considered but are moot in view of the new ground(s) of rejection.

Applicant's arguments filed 1/9/2006 have been fully considered but they are not persuasive. Response to the applicant's argument for claim 12, since the claimed limitations are not the same the applicant must present different argument for consideration.

Conclusion

Any response to this action should be mailed to:

The following address mail to be delivered by the United States Postal Service (USPS) only:

Mail Stop _____
Commissioner for Patents
P. O. Box 1450
Alexandria, VA 22313-1450

or faxed to:

(703) 872-9306, (for formal communications intended for entry)

Or:

The following address mail to be delivered by other delivery services (Federal Express (Fed Ex), UPS, DHL, Laser, Action, Purolater, Hand Delivery, etc.) as follow:

U.S. Patent and Trademark Office
220 20th Street South
Customer Window, Mail Stop _____
Crystal Plaza Two, Lobby, Room 1B03
Arlington, VA 22202.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Bob A. Phunkulh** whose telephone number is **(571) 272-3083.** The examiner can normally be reached on Monday-Tursday from 8:00 A.M. to 5:00 P.M. (first week of the bi-week) and Monday-Friday (for second week of the bi-week).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor **Wellington Chin**, can be reach on **(571) 272-3134.** The fax phone number for this group is **(571) 273-8300.**

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Bob A. Phunkulh
Primary Examiner
TC 2600
Technology Division 2616
March 08 2006

BOB PHUNKULH
PRIMARY EXAMINER

WELLINGTON CHIN
SUPERVISORY PATENT EXAMINER